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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZHAO, DAQUAN

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/024,716	Applicant(s) CHO, CHANG-HYUNG	
	Examiner DAQUAN ZHAO	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7,11,13-17,19-22,24,25 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7,11,13-17,19-22,24,25 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/24/2008 have been fully considered but they are not persuasive.
2. For claim 1, applicant argues, in pages 6-7 of the remark, the combination of Corey et al and Chen fail to teach "selecting the category item for the A/V signal comprises comparing feature information of the A/V signal with predetermined category items". The examiner disagrees.
3. Corey et al teach a system and method of searching and retrieval video program base on the closed caption text data. **Figures 6-7, column 5, lines 45-57, and column 10, lines 5-28** of Corey et al teach the video information is categorized into categories such as movies, sports, entertainment, national news and local news by using "a descriptor" contained in the closed caption text data. The examiner considers the "descriptor" corresponds to the "feature information" of the claimed invention, and the categories of "movies, sports, entertainment, national news...etc" correspond to the "predetermined category items" of the claimed invention. However, Corey et al fail to specify **"comparing"** the "descriptor" with the "movies, sports, entertainment, national news...etc".
4. Another feature of Corey et al, teach the function of **"comparing"**. The categories of "movies, sports, entertainment, national news...etc" of the video functions as index for the user to search and retrieve the desired video easily, See **column 2, lines 5-29**, by comparing the user input text (query) with the index (categories). It would

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have been obvious to one ordinary skill in the art at the time the invention was made to modify the teaching of Corey et al to "compare" the "descriptor" (feature information) with the categories of "movies, sports, entertainment, national news...etc" (predetermined category items) to classify the video program for the purpose of searching and retrieving the video program efficiently. The success of modifying the teaching of Corey et al would have been expected because both the "descriptor" and the categories of "movies, sports, entertainment, national news...etc" are text and Corey et al have explicitly taught comparing the text query and the text index as discussed above. See MPEP 2141, rational G "some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teaching to arrive at the claimed invention. **KSR, 550 U.S. at __, 82 USPQ2d at 1396.**

5. For claim 11, applicant argues, in page 8 of the remarks, Corey et al fail to teach "a controller for selecting and storing a category item for the A/V signal based on a result of comparing the feature information provided from the multiplexing processor with predetermined category items and controlling the demultiplexing processor to record the A/V signal to the first storage medium". The examiner disagrees. As discussed in claim 1 above, Corey et al teach "selecting and storing a category item for the A/V signal based on a result of comparing the feature information provided with predetermined category items". Corey et al also teach a controller to record the A/V signal to first storage medium. (see figures 1 and 2, column 4, lines 23-37, control module 60 and column 5, lines 30-57). It would have been obvious to one ordinary skill

in the art at the time the invention was made to modify the system of Corey et al for the same reasons as discussed in claim 1 above.

6. for claim 6, applicant argues, in page 8 of the argument, Corey et al, Chen and Jain et al fail to teach "determining a compression ration for the A/V signal according to the category item selected for the A/V signal; and recording the A/V signal to a storage medium, which is compressed at the compression ratio." figure 2, paragraph, 15 of Chen teach "determining a compression ration for the A/V signal according to the category item selected for the A/V signal; and recording the A/V signal to a storage medium, which is compressed at the compression ratio." It would have been obvious to one ordinary skill in the art at the time the invention was made to compress the A/V signal at a compression ratio according to the category item selected for the A/V signal to efficiently utilize the limited storage space (Chen, paragraph 7) since Chen suggest, for example, if sports programs were desired to have a relatively good recording quality, the level of recording quality can be set to record information with the halved bit rate as shown in figure 2.

All grounds of rejections are maintained. This Action is made Final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 11, 13, 16, 17, 19, 20, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (U.S. 5,703,655) and Chen (US 2002/0,136,538 A1).

Regarding claim 1, Corey et al teach Corey et al disclose a method of recording an audio/video (AN) signal, comprising:

- Selecting a category item for the A/V signal (e.g. abstract, column 10, lines 5-18);
- Storing category information about the A/V signal, the category information including the category item (e.g. Figure 1, closed caption storage, 72, column 4, lines 31-34); and
- Recording the A/V signal to a storage medium, which is compressed at a compression ratio (e.g. Figure 1, Video/Audio storage, 40, column 3, lines 52-57, and figure 1, compression/decompression module 36).
- Selecting the category item for the A/V signal comprises comparing feature information of the A/V signal with predetermined category items (Corey et al teach a system and method of searching and retrieval video program base on the closed caption text data.

Figures 6-7, column 5, lines 45-57, and column 10, lines 5-28 of Corey et al teach the video information is categorized into categories such as movies, sports, entertainment, national news

and local news by using "a descriptor" contained in the closed caption text data. The examiner considers the "descriptor" corresponds to the "feature information" of the claimed invention, and the categories of "movies, sports, entertainment, national news...etc" correspond to the "predetermined category items" of the claimed invention. However, Corey et al fail to specify **"comparing"** the "descriptor" with the "movies, sports, entertainment, national news...etc". Another feature of Corey et al, teach the function of **"comparing"**. The categories of "movies, sports, entertainment, national news...etc" of the video functions as index for the user to search and retrieve the desired video easily, See **column 2, lines 5-29**, by comparing the user input text (query) with the index (categories). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the teaching of Corey et al to "compare" the "descriptor" (feature information) with the categories of "movies, sports, entertainment, national news...etc" (predetermined category items) to classify the video program for the purpose of searching and retrieving the video program efficiently. The success of modifying the teaching of Corey et al would have been expected because both the "descriptor" and the categories of "movies, sports, entertainment, national news...etc" are text and Corey et al have explicitly taught

comparing the text query and the text index as discussed above.

See MPEP 2141, rational G “some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teaching to arrive at the claimed invention. **KSR, 550 U.S. at ___, 82 USPQ2d at 1396).**

However, Corey et al fail to teach determining a compression ratio for the A/V signal according to the category item selected for the A/V signal. Chen teaches determining a compression ratio for the A/V signal and the category item selected for the A/V signal (e.g. figure 2, paragraph [0015]) It would have been obvious to one ordinary skill in the art at the time the invention was made to compress the A/V signal at a compression ratio according to the category item selected for the A/V signal to efficiently utilize the limited storage space (Chen, paragraph [0007]).

Claim 19 is rejected for the same reasons as discussed in claim 1 above.

For claims 2 and 20, Corey et al disclose the category information (close caption data) is stored in a memory (closed caption storage 72, see claim 1 above) provided separately from the storage medium (Video/Audio storage 40, see claim 1 above).

For claims 3 and 21, Corey et al specify the category information is stored in the storage medium together with the A/V signal (column 4, line 36-38).

For claim 4, Corey et al disclose selecting of the category item for A/V signal, comprises:

- Extracting feature information from the AN signal is seized (e.g. abstract, column 4, lines 1-4);
- Comparing the feature information with a predetermined category list (e.g. column 10, lines 5-18, predetermined category items: movies, sports, entertainment, national news, and local news); and
- Selecting the category item for the A/V signal based on a result of the comparison (e.g. column 10, lines 5-18).

For claim 11, Corey et al teach an apparatus for recording an audio/video (A/V) signal, comprising:

- A first storage medium storing one or more A/V signals (e.g. Figure 1, Video/Audio storage, 40, column 3, line 52-57);
- A demultiplexing processor demultiplexing one of the input A/V signals, extracting feature information in which a category of the input A/V signal is seized, and transmitting the input A/V signal to the first storage medium (e.g. Abstract, figure 1, Receiver Tuner 24, column 3, line 52-67, and column 4, lines 1-12);
- A controller selecting and storing a category item for the input A/V signal based on the feature information provided from the demultiplexing processor and controlling the demultiplexing processor to record the input A/V signal to the first storage medium

(e.g. figure 1, control module 60, video/audio storage 40, column 4, lines 13-38); and

- A second storage medium storing category information including the category item (e.g. figure 1, closed caption storage, 72).

Corey et al fail to teach the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal. Chen teaches determining a compression ratio for the A/V signal and the category item selected for the A/V signal (e.g. figure 2, paragraph [0015]) It would have been obvious to one ordinary skill in the art at the time the invention was made to compress the A/V signal at a compression ration according to the category item selected for the A/V signal to efficiently utilize the limited storage space (Chen, paragraph [0007]).

For claim 13, Corey et al disclose the feature information extracted by the demultiplexing processor is system information (SI) contained in the input A/V signal, or additional information received together with the input A/V signal (e.g. Abstract, figure 1, Receiver Tuner 24, column 4, lines 1-12, addition information: closed caption data).

For claim 16, Corey et al disclose the additional information is used when the input A/V signal is an analog signal (column 3, line 53-55, signal coming in is digitized. Therefore, the A/V signal must be analog signal).

For claim 17, Corey et al disclose the additional information received together with the input signal, is received through the same channel or a different channel than the input A/V signal (Figure 1, baseband video 32, 48, column 3, lines 2-54, column 5, lines 1-4).

For claim 22, Corey et al disclose a selective unit comprises: an extracting unit extracting feature information in which a category of the A/V signal is seized (e.g. Abstract, figure 1, Receiver Tuner 24, column 3, line 52-67, and column 4, lines 1-12); and a comparing unit comparing the feature information with a predetermined category list, wherein the selecting unit selects the category item for the A/V signal based on a result of the comparison (Figure 12A and 12B, column 6, line 54-67, “the name of the video program”, and column 10, lines 5-18).

2. Claims 6, 7, 24 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US. 5,703,655) and Chen (US 2002/0,136,538 A1), as applied to claims 1-4, 11, 13, 16, 17, 19, 20, 21, 22 above, further in view of Jain et al (U.S. 6,360,234).

See the teaching of Corey et al and Chen above.

For Claims 6, 7, 24 and 25, Corey et al disclose the A/V signal can be categorized into different categories (column 10, lines 5-18). However, Corey et al and Chen fail to disclose any user interaction for adding and categorizing the A/V signal. Jain et al teach the user interaction for adding and categorizing the A/V signal (e.g.

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abstract, column 6, line 48-67). It would be beneficial for user to define and add category for the A/V signal, so user would have known the category of the A/V signal well. Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to modify teaching of Corey et al and Chen with the teaching of Jain et al to assist user quickly and efficiently retrieve the video in the storage medium.

3. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US 5,703,655) and Chen (US 2002/0,136,538) as applied to claims 1-4, 11, 13, 16, 17, 19, 20, 21, 22 above, and further in view of Thomas et al (US 6,847,395 B2).

See the teaching of Corey et al and Chen above

For claims 14 and 15, Corey et al and Chen fail to disclose the System information for digital broadcast. Thomas et al disclose system information (SI), wherein the SI is used when the A/V signal is a digital signal (e.g. abstract), and the SI comprises extended text table information, extended channel name descriptor information, and network text table information provided from a Program and System Information Protocol (PSIP) or Out-Of-Band System Information (OOBSI) (e.g. column 6, lines 57-67, column 7, lines 1-6, network Information Table, Extended Text Table, and column 17, line 22-39, Virtual Channel Table). It would have been obvious for one ordinary skill in the art at the time the invention was made to use the system information disclosed by Thomas et al in the system disclosed by Corey et al and Chen for the

same reasons disclosed by Thomas et al, which are allowing users to quickly navigate through the data (Thomas et al, column 6, lines 63-66), giving a good deal of descriptive information about the transport stream, and giving the start time, duration, title, content advisory rating about the A/V signal (Thomas et al, column 17, line 26).

4. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US, 5,703,655) and Chen (US 2002/0,136,538 A1) as applied to claims 1-4, 11, 13, 16, 17, 19, 20, 21, 22 above, and further in view of Strubbe et al (US 5,483,278).

See the teaching of Corey et al and Chen above.

For claim 33, Corey et al and Chen fail to teach the category item comprises any one of drama and documentary. Strubbe et al teach the category item comprises any one of drama and documentary (e.g. column 4, lines 30-39). It would have been obvious for one ordinary skill in the art at the time the invention was made to incorporate the teaching of Strubbe et al into the teaching of Chen and Corey et al to provide user variety choice of entertainment.

All grounds of rejection are maintained. Accordingly, THIS ACTION IS MADE FINAL. See MPEG § 706.07 (a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing data of this action. In the event a first reply is filed within TWO MONTHS of the mailing data of this action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period. Then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing data of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the data of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. The examiner can normally be reached on M-Fri. 7:30 -5, alt Fri. off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daquan Zhao

/Thai Tran/

Supervisory Patent Examiner, Art Unit 2621